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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,025	12/21/2001	David Allen Brown	Brown 5-13-2	5819
7590 08/08/2005			EXAMINER	
Ryan, Mason & Lewis, LLP 90 Forest Avenue Locust Valley, NY 11560			YAO, KWANG BIN	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/032,025	Applicant(s) BROWN ET AL.	
	Examiner Kwang B. Yao	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 6, 8-12, 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Kerr et al. (US 2002/0087709).

Kerr et al. discloses a communication system comprising the following features:

regarding claim 1, a processor (Fig. 3, stream processing node 50) comprising: classification circuitry (Fig. 7, FLOW CLASSIFICATION 64, Fig. 9, steps 414, 416) operative to identify for each of a plurality of packets received in the processor (Fig. 3, stream processing node 50) a corresponding packet flow identifier (Fig. 8, step 204; Fig. 10, step 604); control circuitry operatively coupled to the classification circuitry (Fig. 7, FLOW CLASSIFICATION 64, Fig. 9, steps 414, 416); and at least one operational unit operatively coupled to the control circuitry; wherein the control circuitry is operative to direct one or more packets having a given packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) to the at least one operational unit in a manner that maintains a desired function call sequencing over the one or more packets having the given packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) for one or more order-dependent processing tasks in the processor (Fig. 3, stream processing node 50); regarding claim 2, wherein

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the processor (Fig. 3, stream processing node 50) comprises a network processor (Fig. 3, stream processing node 50) configured to provide an interface for packet transfer between a network and a switch fabric; regarding claim 3, wherein the classification circuitry (Fig. 7, FLOW CLASSIFICATION 64, Fig. 9, steps 414, 416) comprises at least one of a first pass classifier (Fig. 7, FLOW CLASSIFICATION 64) and a second pass classifier (Fig. 9, steps 414, 416); regarding claim 4, wherein the control circuitry comprises at least one of a scheduler (Fig. 3, STREAM QUEUE CONTROLLER 500; Fig. 9, step 416) and queuing (Fig. 2, STREAM QUEUES 74) and dispatch logic; regarding claim 5, wherein the at least one operational unit comprises a plurality of computational units (Fig. 6, APPLICATION PROCESSING ELEMENTS 90, 100) each having one or more execution engines associated therewith; regarding claim 6, wherein one or more of the packet flow identifiers (Fig. 8, step 204; Fig. 10, step 604) each translates to a unique memory (FIG. 6, SQ1, SQ2, SQ3, SQ4) location in memory (FIG. 6, SQ1, SQ2, SQ3, SQ4) circuitry associated with the processor (Fig. 3, stream processing node 50); regarding claim 8, wherein the control circuitry is operative to determine if more than one function associated with a particular order-dependent processing task is being performed on multiple packets having the same packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) during a particular processing interval; regarding claim 9, wherein if more than one function associated with a particular order-dependent processing task is being performed on multiple packets having the same packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) during a particular processing interval, the control circuitry maintains the desired function call sequencing for the particular order-dependent processing task; regarding claim 10, wherein if more than one function associated with a particular order-dependent processing task is not being performed on

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multiple packets having the same packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) during a particular processing interval, the control circuitry permits an arbitrary function call sequencing for the particular order-dependent processing task; regarding claim 11, wherein the packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) for the given packet is extracted from a header of the packet; regarding claim 12, wherein each of the received packets has a context identifier assigned thereto within the processor (Fig. 3, stream processing node 50) prior to function call issuance for that packet; regarding claim wherein a given set of packets having the same packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) have different context identifiers assigned thereto; regarding claim 16, wherein the context identifiers assigned to the received packets are utilized to maintain the desired function call sequencing for the received packets associated with a particular packet flow identifier (Fig. 8, step 204; Fig. 10, step 604); regarding claim 17, wherein the processor (Fig. 3, stream processing node 50) is configured as an integrated circuit; regarding claim 18, a method for use in processing packets in a processor (Fig. 3, stream processing node 50), the method comprising the steps of: identifying for each of a plurality of packets received in the processor (Fig. 3, stream processing node 50) a corresponding packet flow identifier (Fig. 8, step 204; Fig. 10, step 604); and directing one or more packets having a given packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) to at least one operational unit of the processor (Fig. 3, stream processing node 50) in a manner that maintains a desired function call sequencing over the one or more packets having the given packet flow identifier (Fig. 8, step 204; Fig. 10, step 604) for one or more order-dependent processing tasks in the processor (Fig. 3, stream processing node 50). See pages 1-7.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kerr et al. (US 2002/0087709) in view of Maher, III et al. (US 6,381,242).

Kerr et al. discloses the claimed limitations above. Kerr et al. does not disclose the following features: regarding claim 7, wherein the unique memory location corresponding to a given packet flow identifier stores at least a counter specifying a number of functions performed for an associated packet flow.

Maher, III et al. discloses a communication system comprising the following features: regarding claim 7, wherein the unique memory location corresponding to a given packet flow identifier stores at least a counter (column 9, line 66 to column 10, line 1; column 10, lines 31-35) specifying a number of functions performed for an associated packet flow. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Kerr et al., by using the features, as taught by Maher, III et al., in order to provide an efficient data communication by being able to maintain state information or awareness throughout an entire data traffic flow. See Maher, III et al., column 2, lines 45-46.

5. Claims 13, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerr et al. (US 2002/0087709) in view of McCrocklin et al. (US 4,761,733).

Kerr et al. discloses the claimed limitations above. Kerr et al. does not disclose the following features: regarding claim 13, wherein the context identifiers are selected from a fixed number of tokens; regarding claim 14, wherein the fixed number of tokens comprises approximately 256 tokens, the context identifier comprising an 8-bit identifier.

McCrocklin et al. discloses a system comprising the following features: regarding claim 13, wherein the context identifiers (column 13, lines 59-64) are selected from a fixed number of tokens. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Kerr et al., by using the features, as taught by McCrocklin et al., in order to provide an efficient system by improving the speed of the execution. See McCrocklin et al, column 14, lines 24-25.

Regarding claims 14, Kerr et al. and McCrocklin et al. do not disclose the specific number of tokens and bits. However, it would have been obvious to one of the ordinary skill in the art to implement any number of tokens and bits as a design choice based upon the arrangement specification and requirement for users.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hathaway et al. (US 2003/0061269) discloses a data flow engine.

Maher; III et al. (US 2002/0143948) discloses a policy gateway.

Sen et al. (US 6,765,909) discloses a classification application.

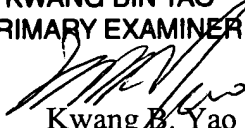
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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 571-272-3182. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER



Kwang B. Yao
August 5, 2005